



SPALLATION NEUTRON SOURCE PROJECT EXECUTION PLAN

APPENDIX C

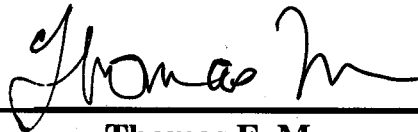
SNS PROJECT OFFICE PLANS AND CONTROLLED ITEMS

The contents of this PEP Section are under the purview and control of the Associate Laboratory Director for SNS, who must approve and sign all changes.

APPENDIX C

SPALLATION NEUTRON SOURCE
PROJECT EXECUTION PLAN

SNS PROJECT OFFICE
PLANS AND CONTROLLED ITEMS



Thomas E. Mason
Associate Laboratory Director for SNS

Oct. 22 / 03

Date

1. INTRODUCTION

This Appendix C of the *Spallation Neutron Source (SNS) Project Execution Plan (PEP)* describes the project team organization structure, responsibilities, and project management systems that will be used to control day-to-day activities of the project. This section does not repeat information included in the other appendices nor information contained in other project documents. Changes to this appendix are approved by the SNS Associate Laboratory Director, although all revisions are provided to the U.S. Department of Energy (DOE) Project Director.

2. PROJECT ORGANIZATION AND RESPONSIBILITIES

2.1 Partnership

The SNS Project is being performed as a multilaboratory partnership, led by the SNS Project Office at Oak Ridge, Tennessee. A memorandum of agreement (MOA) between the Project Office and each of the participating laboratories forms the basis for implementing the SNS Partnership (see attachment). The MOA formalizes the mutual agreement to the technical, cost, and schedule baselines established by the SNS Project and the partner laboratories. It represents the agreement of all of the signatory laboratories to manage the project as outlined subsequently, and expresses their commitment to perform the agreed-to tasks in a safe, environmentally benign, high-quality, timely, responsible, and cost-effective manner. The SNS Associate Laboratory Director and Partner Laboratory Directors have signed the MOA. The exact scope of work and committed resources will be established at least yearly and will be agreed to by each laboratory and the SNS Project Office through work/funding packages.

2.2 Participant Responsibilities

2.2.1 SNS Project Team

The organization of the project team is shown in Figure C.1. The roles and responsibilities of the key positions shown on the chart are as follows.

Associate Laboratory Director—Roles and responsibilities for the Associate Laboratory Director are outlined in the base document of the PEP.

Human Resources Manager—Responsible for the successful delivery of on-site human resources services, including workforce planning, recruiting, hiring, and retention of a diverse and highly qualified team. Facilitates the OFCCP MegaConstruction Project activities.

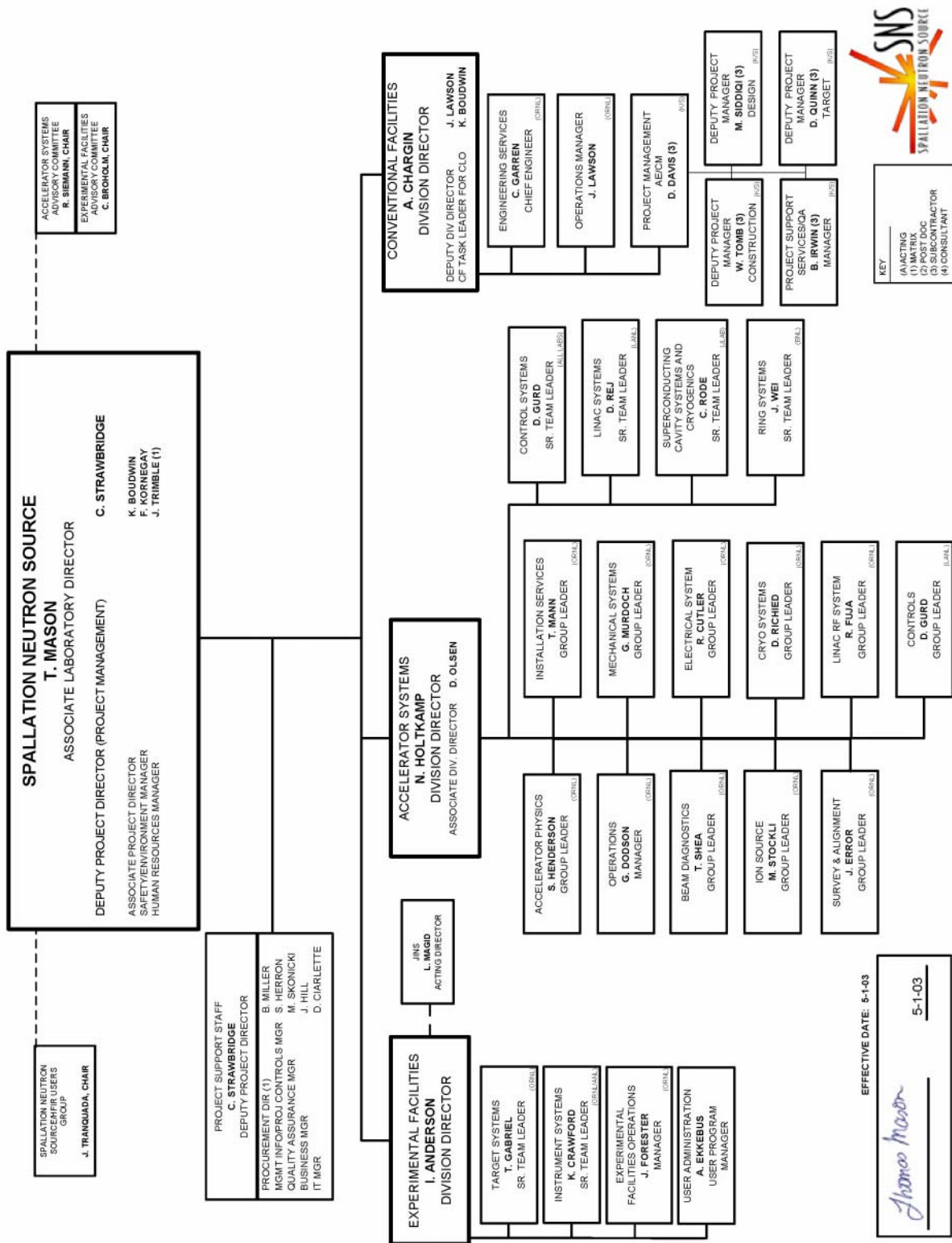


Figure C.1. SNS organization chart.

Environment, Safety, and Health (ES&H) Manager—The Associate Laboratory Director will exercise line responsibility for safety on the project and has appointed an ES&H Manager to guide the organizational elements in their respective safety efforts. The ES&H Manager is responsible for implementation of the project safety program, including analyses and assessments; licensing and permitting activities; generation and approval of documentation; and integration of ES&H factors into design, installation, commissioning, and operations. Initiates operational readiness reviews.

Deputy Project Director—Responsible to the Associate Laboratory Director for the day-to-day project management of the SNS Project. Ensures that the project is successfully completed safely (ensuring environmental compliance), on time, and within budget.

Associate Project Director, Finance, Administration and Management—Responsible for coordination of finance, administrative, and management matters across the project.

Project Staff—Project staff, who report to the Deputy Project Director, provide support to the entire project, including oversight and guidance to the partner laboratories to ensure that project goals and user expectations are met. The functions within Project Staff are as follows.

Quality Assurance (QA) Manager—Responsible for planning, generating, and obtaining approval for QA requirements and documentation. Performs QA surveillance and/or audits.

Procurement Director—Responsible for management of the procurement process, including planning, coordination, and implementation; provides contract administration of the Architect-Engineer/Contract Manager (AE/CM) contract; establishes project-wide contracts for standardized procurements; and assists, reviews, and evaluates partner procurement operations.

Business Manager—Responsible for financial management, planning, and reporting. Provides accounting support. Coordinates business and overhead functions with partner laboratories.

Management Information and Project Controls Manager—Responsible for project control functions, including cost and schedule development, coordination, review, and maintenance, baseline change control process, and project progress reporting. Also responsible for management information systems and the project document control program.

Information Technology Manager—Responsible for establishing, implementing, maintaining, and directing an information technology (IT) program and services for the SNS Project. Acquires and maintains networks, servers and trained staff, and develops IT procedures. Responsible for computer security. Provides oversight and direction to subcontractor IT programs, including the AE/CM.

Experimental Facilities Division Director—Responsible for oversight and management of scientific, engineering, and technical staff and for all aspects of experimental facilities, including

target and instruments systems. Establishes and coordinates user programs, including outreach to the scientific community and ensures that the project is responsive to user needs. Ensures maximum scientific productivity of the SNS. Also responsible for executing their respective portion of project safely and within approved budget and schedule.

Accelerator Systems Division Director—Responsible for oversight and management of scientific, engineering, and technical staff and for directing the design, fabrication, installation, testing, and commissioning of accelerator and control systems. Also responsible for executing their respective portion of project safely and within approved budget and schedule.

Conventional Facilities Division Director—Responsible for the design and construction of the facilities required for housing and serving the technical systems and research equipment. Ensures that the design and construction are within approved budget and schedule and meet applicable technical, environmental, and safety standards and requirements. Directs AE/CM activities.

AE/CM Project Manager—Serves as a single point of contact for the Conventional Facilities Division Director and provides budgetary, technical, and other coordination for AE/CM personnel.

2.2.2 Partnering Laboratories

Each laboratory is responsible for delivering a particular subsystem for installation and commissioning at the construction site. The partnering laboratories have been assigned the responsibility for efforts in level 2 work breakdown structure (WBS) elements as shown subsequently.

<u>WBS Element</u>	<u>Laboratory</u>
1.1 Research and development (R&D)	All laboratories as shown in the level 3 (or 1.1.x) WBS structure
1.2 Project Support	SNS Project Office
1.3 Front-End Systems	Lawrence Berkeley National Laboratory (LBNL)
1.4 Linac Systems	Los Alamos National Laboratory (LANL) Thomas Jefferson National Accelerator Facility (TJNAF)
1.5 Ring and Transfer Systems	Brookhaven National Laboratory (BNL)
1.6 Target Systems	SNS/Oak Ridge with Argonne National Laboratory (ANL) assisting
1.7 Instrument Systems	SNS/Oak Ridge with ANL assisting
1.8 Conventional Facilities	SNS/Oak Ridge managing an AE/CM team contract
1.9 Integrated Controls Systems	Instrumentation and controls (I&C) working group made up of representatives from each lab, LANL will lead
1.10 Pre-Operations	Oak Ridge National Laboratory (ORNL)

The structure being used is to consider level 2 WBS elements 1.3 through 1.10 as subprojects that are integrated by the SNS Project Office. An STL is assigned responsibility for each WBS level 2 element, except for element 1.4, in which case there are two STLs, and element 1.8,

Conventional Facilities, in which case, the Conventional Facilities Division Director or his designee assumes the responsibilities of an STL.

The STLs must establish teams to handle the technical, administrative, and managerial work in their areas along with ensuring that all ES&H and QA requirements associated with their tasks are met. The STLs are the primary technical and management links to each assigned task in the SNS Project and report to an SNS Division Director. Each STL is responsible for work needed to support R&D, requirements definitions, work planning and tracking, schedule and cost estimate input, reporting, configuration management activities, design, procurement, fabrication, and delivery of equipment to the site. In addition to delivering equipment and systems that meet specification and performance requirements, transfer of sufficient knowledge and documentation for subsequent installation, integration, operation and maintenance by SNS Oak Ridge is required. Subcontracts for design, fabrication, consulting, analysis or other work will be held and managed by the laboratory performing the work. Warranties are to be transferred to SNS. Latent design defects attributable to a partner laboratory will be resolved on a case-by-case basis.

MOAs will be developed for continuing support during installation, testing, and commissioning of the systems provided by the partner laboratories after all equipment and documentation has been delivered to Oak Ridge.

The Division Directors are responsible for managing installation at the site, system testing, commissioning, and turnover to operations.

2.2.3 Division of Work Between the Project Office, Division Directors, and Partner Laboratories

The general approach to dividing work between the Project Office, Division Directors, and the partnering laboratories is the following: the Project Office will provide project-wide services and activities, and each laboratory team will provide activities needed specifically for its area. A description of how these responsibilities will be divided for major project activities follows.

Performance Measurement and Reporting

The Project Office will develop and implement the earned value performance measurement and reporting system, maintain the system, generate project-wide reports, and generate and distribute reports to appropriate personnel. The STLs and Division Directors (and their support teams) will generate report data and enter reports into the project performance measurement and reporting system.

The *Project Controls Manual*, SNS 102010200PC0001, more fully describes the roles and responsibilities in this area.

Quality Assurance

The Project Office QA Manager will maintain the *SNS Quality Assurance Plan*, SNS 102040000QA0001, and will perform surveillances and audits of project-wide QA

management activities. Partner laboratories will provide QA plans, vendor surveillance, inspection, and other QA activities needed to support their respective areas.

Project Technical Baseline

The STLs and Division Directors will maintain the project technical baseline in the *SNS Parameter List*, SNS 100000000PL0001, and the *WBS Descriptors*, SNS 100000000BL0002. Requirements for each work area will be provided and maintained by the appropriate design team. The WBS Descriptors for Levels 1, 2, 3, and 4 are placed under configuration control. Lower levels (Level 5 and below) may be prepared, but these are not controlled by the configuration management system.

Other, lower level, baseline documents include System Requirements Documents, Design Criteria Documents, Interface Control Documents, and Interface Definition Documents provide further definition of the technical baseline and are also controlled by the configuration management system.

Project Contingency and Risk Management

Project risks will be identified by the STLs and/or the Division Directors. The Executive Management Team will evaluate and in conjunction with the STL determine needed actions. The Project Controls Manual and Configuration Management Plan more fully describe the roles and responsibilities in this area.

Configuration Management

The *Configuration Management Plan*, SNS 102010200PC0002, defines the responsibilities of the project participants.

Environment, Safety, and Health

The ES&H Manager is responsible for safety analyses, determining hazard classification, generating safety assessment documents and safety analysis reports, and obtaining appropriate approvals. The partner laboratories are responsible for providing technical assistance and information requested by project safety analysis/documentation teams.

The ES&H Manager is responsible for obtaining environmental licenses and permits for the SNS Project. Partner laboratories are responsible for obtaining all licenses and permits for activities at their sites.

Reliability, Availability, and Maintainability

Project-wide reliability, availability, and maintainability (RAM) requirements will be determined and implemented by the SNS divisions.

Readiness Reviews

The Project Office will establish review boards for performing readiness reviews. Each partner laboratory will assemble and prepare information for reviews. Project Office staff may participate in partner laboratory readiness review assessments. The *Accelerator Readiness Review Plan of Action*, SNS 1000000000-PN05-R00 describes the readiness review process for the SNS through CD-4.

Design Reviews

The Project Office has established a project-wide design review program (SNS-MS-P01). Reviews will be conducted by the Project Director, appropriate Division Directors, partner laboratories, and the AE/CM.

Intellectual Property

Intellectual property such as patents, trademarks, copyrights, and other forms of comparable property rights protected by federal law will be identified by all participants in accordance with their laboratory policies and will be tracked by the Project Office.

Transition to Operations

Hand off agreements will be developed between the SNS divisions and the partner laboratories that provide details of responsibilities and the materials, equipment, documentation, etc. to be delivered to the SNS site for the transition from construction to operations.

There are a variety of procedures and division-specific plans covering turnover and installation:
SNS 102000000-PC0001_R00, Spallation Neutron Source (SNS) Pre-installation Policy & Requirements,”
SNS 100000000-PN0001-R00, “Accelerator Turnover Plan,
SNS 100000000-PN0002-R00, “Accelerator Systems Division Installation Plan,
SNS 000000000-000000-R00, Accelerator Systems Division Commissioning Program Plan”
SNS 107000000-PN0001-R00, Experimental Facilities Division Instrument Systems Integrated Installation Plan

Components, subsystems, and systems will be turned over to Operations at the completion of installation and acceptance testing.

Decontamination and Decommissioning

Partner laboratories will incorporate design features allowing decontamination and decommissioning (D&D) in accordance with the SNS *Decontamination and Decommissioning Plan*, SNS 102030200TR0002.

Procurement

The Project Office will provide procurement personnel to manage the AE/CM contract, coordinate a consistent project-wide approach, and assist laboratory procurement personnel. Each partner laboratory will provide procurement support to manage subcontracts in its work area. All significant procurement actions will be monitored by the Project Office, and an ongoing dialogue will exist with the laboratories to monitor progress and status. Standardized contracts may be established by the Project Office for common items that will be used by partner laboratories. Also, partner laboratories will provide the Project Office with any necessary information and data to satisfy procurement management programs established by DOE or SNS.

Information Management

The Project Office will coordinate project-wide information technology and information management systems. Partner laboratories will provide electronic files for their work scope for input to the project systems.

2.3 Advisory Committees

Several technical advisory committees are represented by the blocks on Figure C.1 labeled “Project Advisory Committees.” These committees provide managerial and technical assistance to the project team and a firm connection to the neutron user community. Additionally, the SNS Advisory Board and the Laboratory Directors of ANL, BNL, LANL, LBNL, ORNL, and TJNAF will provide regular oversight of the project.

The roles of these committees are as follows. The project person with primary coordination responsibility for each committee is listed in parentheses at the end of each paragraph.

SNS Advisory Board - The members of the SNS Advisory Board are charged to review the progress of the SNS and to advise the UT-Battelle Board of Governors, the Partner Laboratory Directors and the Associate Laboratory Director for the SNS on matters related to construction planning and project management. The SNS Advisory Board (SNSAB) will provide continuity of oversight of the SNS project on behalf of the managing and operating contractor (UT-Battelle, LLC) until the end of construction. The SNSAB will identify and bring to the attention of the UT-Battelle Board any issues whose resolution is critical to the technical success of the project and to meeting project cost and schedule goals. Additionally, the Board can be of significant value to articulate, when needed, project needs to external entities and make certain that the scientific merit of the SNS project is adequately understood by stakeholders, such as Congress, the Department of Energy, users and local government. The SNSAB will meet periodically as requested by the SNSAB Chairman and report its findings and recommendations to the UT-Battelle Board of Governors. (Associate Laboratory Director)

SNS/HFIR Users’ Group (SHUG)—This group will be made up of current and potential users of SNS and the High Flux Isotope Reactor (HFIR), will be the same community that uses many current neutron facilities for R&D, and will be the same community from which the instrument advisory teams (IATs) and instrument development teams (IDTs) are drawn. The leadership of

this group will be elected by the user community and will provide advice to the SNS on scientific operations and instrumentation development. (Associate Laboratory Director)

Accelerator Systems Advisory Committee (ASAC)—This committee will be composed of external experts trained in accelerator physics and engineering who are familiar with the design, construction, and operations of major accelerator systems. This group will advise the SNS accelerator team on technical choices, trade-offs, and decisions; value engineering; measures to improve availability and reliability of operations; diagnostics and controls; etc. (Accelerator Systems Division Director)

Experimental Facilities Advisory Committee (EFAC)—Similar to the ASAC, this committee will provide advice and guidance to the development of the target, moderators, and instruments for SNS and will pay particular attention to the optimization of the combined system to deliver the maximum benefit to the users. They will also provide advice and guidance to the SNS on the choice of instruments to build, assist in forming the IATs and IDTs to build these instruments, and generally provide direction to the formation of the experimental facilities at SNS. The SNS will have the additional benefit of having close project ties with the Intense Pulsed Neutron Source, High Flux Beam Reactor, Los Alamos Neutron Science Center, and HFIR facilities and user programs at ANL, BNL, LANL, and ORNL, respectively. It will consist of a mixture of accelerator, target, moderator, and neutron scattering/instrumentation scientists, most of whom have had extensive experience in designing, constructing, and operating pulsed neutron source targets and/or instrumentation. (Experimental Facilities Division Director)

3. WORK BREAKDOWN STRUCTURE

The WBS for the SNS Project is contained in the *WBS Descriptors*, which is the official WBS for the SNS Project. This document contains a listing of WBS level 1, 2, 3, and 4 elements and a description of the WBS elements.

4. MANAGEMENT SYSTEMS

This section describes the integrated systems used to manage the cost and schedule performance and technical accomplishments of the project. Although the systems are described separately, they are mutually supportive and are employed in an integrated manner to achieve project objectives. As conditions change during the evolution of the project, the systems will be modified appropriately to remain responsive to the needs for project control and reporting. The project management, measurement, planning, and control systems employed by SNS are consistent with DOE guidelines.

4.1 Work Authorization and Management of Funds

Appendix B of the PEP describes the work authorization process for the project. The Project Office will develop standard work/funding package formats, provide assistance when needed, and perform other project-wide management and administration. The STLs and their teams will

prepare work plans and provide data to the Project Office. The *Project Controls Manual* details further the roles of project participants in the assignment of work and the funding process.

4.2 Configuration Management

The change control process to manage the technical, cost, and schedule baselines is defined in the *Configuration Management Plan*.

4.3 Document and Records Management

The Document and Records Management Process is defined in the *Records Management Procedure*, SNS IO-P01.

4.4 Project Monitoring and Assessment

Real-time monitoring of the SNS Project will occur through routine interfacing among project participants; however, formal meetings and reviews will be conducted to identify and resolve interface issues within the project. Formal SNS meetings and reviews are described subsequently. Meetings with DOE are described in Appendix B of the PEP.

1. **Executive Management Meetings**—Regular meetings are held by the Associate Laboratory Director with the executive management team. These meetings are typically concerned with the following: current status of the project; SNS management issues; proposed major changes in project scope, cost, or schedule; laboratory, DOE, or other actions potentially affecting the project; advisory committee involvement; user coordination; and senior-level management decision making and coordination.
2. **Deputy Project Director's Meetings**—Deputy Project Director's meetings are held regularly with the Oak Ridge project participants and with the STLs at the partner laboratories. The meetings typically focus on cost and schedule, including funding changes, current-year budget status, earned value performance trends, schedule concerns, and workforce requirements.
3. **Technical Group Meetings**—Each Division Director holds regular meetings of the division staff to disseminate information transmitted from other meetings and to address issues of concern to the division.
4. **Technical Information Meetings**—These meetings disseminate technical information about the project to SNS personnel as well as to others. The information includes the current status of work and outstanding issues associated with the system design, fabrication, and interface concerns.
5. **General Project Meetings**—At least twice a year principal project participants from the Project Office and partner laboratories will meet to review the overall project, including the cost, schedule, and technical issues.

4.5 Performance Measurement Plans and Procedures

The SNS Performance Measurement System and participant responsibilities are described in the *SNS Project Controls Manual*.

4.6 Research and Development Activities Management

At the beginning of each fiscal year, available R&D funds for the project are allocated to the SNS. Then, the SNS Deputy Project Director, in consultation with the Division Directors, conducts the budgeting process of various R&D activities. Responsibility and authority for managing day-to-day activity for the R&D program resides with the STL. The plans, schedules, costs, and milestones are approved by the responsible Division Director. The Deputy Project Director distributes the R&D funding to the laboratories and audits the performance of these activities through meetings and monthly cost reports.

5. QUALITY ASSURANCE

Quality assurance is an integral part of the design, procurement, fabrication, and construction phases of the project. Special attention is devoted to items that affect the operational reliability of project facilities. The *SNS Quality Assurance Plan* covers all phases of the project. This plan delineates the QA tasks, as well as responsibilities for these tasks. The plan is implemented through the use of QA/quality control (QC) procedures and guidelines.

The SNS quality program will also incorporate the applicable quality systems already existing within the SNS participating national laboratory facilities. The Project Office QA group will maintain an oversight role of the partner laboratories' quality systems as they apply to the SNS. The Project Office QA group will also provide guidance and support to the partner laboratories in an effort to maintain common and effective quality practices throughout the entire SNS Project.

All participating laboratories, the AE, CM, and vendors will implement QA/QC programs appropriate to the services or items being furnished. These programs, as well as implementing procedures, are subject to review and audit by the SNS QA team.

6. ENVIRONMENT, SAFETY, AND HEALTH

The SNS will be designed, constructed, and operated in such a manner to protect the safety of workers, the public, and the environment. This will be accomplished by preparation of appropriate National Environmental Protection Act documentation; designing, procuring, constructing, commissioning, and operating the facility in accordance with the Integrated Safety Management System (ISMS) plan; designing systems and structures to minimize waste generation and to accommodate decontamination and decommissioning; preparation of appropriate safety documents for all systems, structures, and components; and implementation of effective safety programs to govern construction on the SNS site. Detailed descriptions of the requirements for these programs are included in the *SNS ES&H Plan*, SNS 1020300000ES0001.

All project activities are conducted in compliance with applicable SNS work smart standards.

7. TRANSITION

Spallation Neutron Source (SNS) Pre-Installation Policy & Requirements SNS 102000000-PC0001-R01 was prepared to communicate policy/requirements and assign responsibilities for the receipt and management of technical components and documents in order to ensure readiness for installation. All SNS divisions and partner laboratories are responsible for the implementation of this policy.

8. PROJECT BASELINES

Project technical, cost, and schedule baselines have been developed. When changes become necessary, the change control process, detailed in the *Configuration Management Plan*, will be used.

8.1 Technical

The *SNS Parameter List* and *WBS Descriptors* define the overall facility functional requirements. Plant configuration control will be maintained by the SNS Project team throughout the life of the project to reflect the current configuration of the SNS. The Level 0, 1, and 2 baselines are provided in the base document and Appendices A and B of this PEP.

8.2 Cost

The project cost baseline for WBS level 2 is stated in Appendix B of the PEP. A description of budget development and cost baseline maintenance is described in the Project Controls Manual.

8.3 Schedule

The integrated project schedule sets forth the major activities, decision points, and activity interfaces essential for completion of the SNS Project. A description of schedule development and maintenance is contained in the *Project Controls Manual*.

Level 0, 1, and 2 project milestones are summarized in the base document and Appendices A and B of this PEP. The lower level milestones are included in the associated Primavera schedules.

9. REPORTING

Regular reports of progress on the approved work plans utilizing earned value methods will be compiled and submitted by the STLs to the SNS Project Office and the STLs' respective laboratory management. These reports shall include financial information, as well as documentation of technical progress, required deliverables and milestones.

Anticipated or actual cost and/or schedule variances that would be in excess of thresholds established in the Project Controls Manual should be clearly identified as soon as known, and reported to the SNS Deputy Project Director and their own laboratory management. An action plan to correct the problem will be proposed, endorsed by partner senior laboratory management and forwarded to the SNS Deputy Project Director. Progress will be reported on this plan until correction is complete.

Reports will be provided to DOE as described in Appendix B and detailed in the *Project Controls Manual*.

**Memorandum of Agreement
Between
the Spallation Neutron Source
and
Argonne National Laboratory,
Brookhaven National Laboratory,
Lawrence Berkeley National Laboratory,
Los Alamos National Laboratory,
Oak Ridge National Laboratory,
and
Thomas Jefferson National Accelerator Facility**

1. Introduction

The Spallation Neutron Source (SNS) Project is being accomplished by a partnership between six laboratories – Argonne National Laboratory (ANL), Brookhaven National Laboratory (BNL), Lawrence Berkeley National Laboratory (LBNL), Los Alamos National Laboratory (LANL), Oak Ridge National Laboratory (ORNL) and the Thomas Jefferson National Accelerator Facility (TJNAF). This MOA provides the overall framework for the business relationship between the project and the partner laboratories for the design, construction, installation and commissioning of the SNS. DOE through ORNL provides funding for this work to the partner laboratory conducting the work.

2. Scope

This MOA formalizes the mutual agreement to the technical, cost and schedule baselines established by the SNS Project and the partner laboratories. It represents the agreement of all the signatory laboratories to manage the project, as outlined below, and expresses their commitment to perform the tasks agreed to in a safe, environmentally-benign, high-quality, timely, responsible and cost-effective manner. The signatories commit to making available the resources from their laboratories that are necessary to execute the approved work plans and to be accountable for project deliverables assigned to their laboratories as derived from the project technical, cost and schedule baseline documents.

3. Roles and Responsibilities

Spallation Neutron Source Management

The SNS management will be responsible for the overall project management and project leadership.

Participating Laboratories

The six participating laboratories will be full partners in the project. They will be responsible and accountable for their respective assigned work products.

Department of Energy

The Department of Energy (DOE) will be responsible for oversight of the project.

4. Provisions

Introduction

Overall executive authority for managing the SNS will be vested in the ORNL Associate Laboratory Director for SNS who is also the SNS Project Director and is vested with the authority to deal directly with partner laboratory directors on SNS matters. The SNS Project is to be managed to the greatest extent possible as if it were contained within a single institution. Lines of authority and responsibility will follow the organization structure established by SNS management and documented in an organization chart updated monthly. Emphasis is placed on minimizing the effects of boundaries between laboratories, with reporting lines moving through the project organization, and across laboratory boundaries as indicated by the approved organization chart. Human resources, project controls and other management policies will reflect this philosophy.

Project Baselines and Management

Project baselines detailing the technical scope of work, cost estimates and project schedule will be developed, reviewed and approved by the project and relevant partner laboratories as a prerequisite to formalizing the MOA. These baselines, once approved, will be under configuration management; changes must follow the procedures outlined in the management documents described below.

The Project Execution Plan (PEP) and the Project Controls Manual (PCM) contain the project management structures and methodologies to be employed in the conduct of the project, including reporting, communication, reviews, performance metrics, change control, funding mechanism and handling of contingency.

Assignment of Work

Work plans will be developed, at least on a yearly basis, by the appropriate task leaders according to the baselines, and will be reviewed and approved by SNS management. Responsibilities for work and deliverables from each of the partner laboratories will be contained in these work plans. Partner laboratories will review and concur with these work plans, and accept the responsibilities contained therein, as a prerequisite to funding allocations from the project office.

Accountability

As specified in the PEP, regular reports of progress on the approved work plans will be compiled and submitted to the SNS project office and laboratory management by appropriate responsible managers. These reports shall include financial information, as well as documentation of technical progress, required deliverables and milestones.

Anticipated or actual cost and/or schedule variances that would be in excess of thresholds established in the PEP should be clearly identified as soon as known and reported to SNS and laboratory management. An action plan to correct the problem will be proposed, endorsed by senior laboratory management and forwarded to SNS management. Progress will be reported on this plan until correction is complete.

To ensure high performance, SNS management will recommend performance ratings at least annually to the DOE for each of the partner laboratories consistent with the SNS performance measures contained in their M&O contracts.

SNS management may reassign work among participating laboratories for non-performance or as might be required to ensure maximum efficiency for the conduct of the project, consistent with the project's change control process.

Project Staffing

Each laboratory will provide staff with the required skills and experience to properly discharge the responsibility assumed by the laboratory. Staff assigned to work on the SNS project will be fully accountable to the project for this work, and will be flexible with regard to work location to best suit the needs of the project.

Responsibility for personnel actions, including placement in and removal from positions in the project, performance appraisals and compensation recommendations will lie within the line management of the SNS Project as defined by the current organization chart, crossing laboratory boundaries where indicated. Appropriate laboratory management will participate in these actions. As part of the SNS Project organization, the Senior Team Leader at each laboratory will be responsible for personnel within their laboratory. All personnel actions must respect existing labor agreements at the partner laboratories.

Indirect Costs

Each partner laboratory shall set indirect costs charged to the SNS project in accordance with their disclosed cost accounting practices in order to: 1) ensure the appropriate causal/beneficial relationship of indirect costs applied to the project; 2) minimize the fluctuations in the indirect cost charges over the life of the project. The accounting treatment for indirect costs will be reviewed during the annual negotiations on the projected work plans between the partner laboratories and SNS management.

Equipment Disposition

Upon completion of construction, any SNS-funded equipment not moved to ORNL, nor deemed by SNS management to be useful to the operation or upgrade of the SNS facility, shall become the property of the purchasing laboratory at no further cost to the SNS project or the purchasing laboratory. Exceptions to this policy require specific agreement between SNS management and the partner laboratory prior to purchase. Each partnering laboratory will track and maintain an inventory of all the items for the project in accordance with their property management system.

5. MOA Implementation

Enactment

This document, when properly executed, will supersede the earlier version of this MOA, marked "Revision 2" dated 10/1/99.

Change Procedure

In the event of necessity for changes in this Memorandum of Agreement, such changes are implemented by mutual agreement of the SNS project and the partner laboratories and will become effective upon reissue of the properly signed MOA. This new MOA shall bear a revision number and effective date as a footer on each page.

Effective Time

This Memorandum of Agreement shall become effective upon the latter date of signature of the parties. It shall remain in effect until superseded, or ten years from the effective date, whichever occurs first. In the event of cancellations of the SNS project, a revised MOA shall be issued specifically designed to handle closeout procedures including orderly termination of ongoing work and responsibilities and disposal of assets accrued by the SNS project.

Approvals

The undersigned concur with the terms of this Memorandum of Agreement:



Hermann A. Grunder
Director, Argonne National Laboratory

5-15-2001
Date



John C. Browne
Director, Los Alamos National
Laboratory

5-16-2001
Date



John H. Marburger
Director, Brookhaven National
Laboratory

5-14-2001
Date



William J. Madia
Director, Oak Ridge National
Laboratory

5-11-2001
Date



Charles V. Shank
Director, Lawrence Berkeley National
Laboratory

5-11-2001
Date



Christoph Leemann
Acting Director, Thomas Jefferson
National Accelerator Facility

5-15-2001
Date



Thomas E. Mason
Associate Laboratory Director
Spallation Neutron Source

5-10-2001
Date